
NATIONAL
PANCOAST
VENTILATOR
COMPANY
PHILADELPHIA

Introductory

OFFICE OF THE

NATIONAL PANCOAST VENTILATOR CO.

PHILADELPHIA

To the Trade:

We present herewith our Annual Catalogue for 1900, illustrating and describing an extensive line of PANCOAST VENTILATORS, especially adapted for the ventilation of all kinds of buildings.

While these VENTILATORS do not cost more than other makes, it has been conclusively demonstrated that they are superior to all others, and cannot fail to give entire satisfaction.

Our unlimited facilities enable us to promptly fill all orders.

We manufacture the best Ventilator on the market, of well-known reputation, and furnish the same at the lowest market price consistent with quality, and trust to be accorded the favor of your patronage.

Very truly yours.

National Pancoast Ventilator Co.

Main Office, 723 Drexel Building

PHILADELPHIA, PA.

NEW YORK

BOSTON

WITH pardonable pride we herein exhibit half-tones of a large number of prominent buildings, also testimonials from persons using "Pancoast" Ventilators, the merits and fame of which have been universally acknowledged. We have reached that high standard of making a perfect ventilator. Although on the market but a short time, the "Pancoast" can show a record second to none.

But our grand success has not been achieved alone; eminent architects and engineers throughout the country saw at a glance the scientific principles upon which the "Pancoast" was constructed, and thousands have been sold because of their high appreciation of its true merit.

The subject of **proper ventilation** is now too well understood that we need describe the many uses for which the "Pancoast" is adapted. No intelligent person who cares for good health should have a building erected without making ample provision for ventilation.

Take for instance a Street Car. It contains from 500 to 1,000 cubic feet of air. Fifty people will vitiate it in less than five minutes. School children and patrons of Public Halls, etc., rarely get over five cubic feet of fresh air per minute; many places of **Business, Mills, Factories,** or **luxurious homes** are as well supplied.

Sixteen thousand breaths of pure air a day, per person, is what nature demands for perfect health.

Now if a large part of these sixteen thousand breaths are vitiated air, what is the result? Why, headache, typhoid and scarlet fever, consumption, diphtheria, and a gradual poisoning of the whole system.

Few realize how thoroughly a **single pair** of lungs can vitiate the air of a fair-sized room in the course of a few hours. In speaking on this subject before a class of students at the College of Physicians and Surgeons of New York City, Prof. Willard Parker called attention to the matter very aptly in the following words: "If, gentlemen, instead of air, you suppose this room filled with pure, clear water, and that instead of air you were exhaling, twenty times a minute, a pint of milk, you can see how soon the water, at first clear and sparkling, would become hazy and finally opaque; the milk diffusing itself rapidly through the water. You will thus be able to appreciate, also, how at each fresh inspiration you would be taking in a fluid that grew momentarily more impure. Were we able to **see the air** as we do the water, we would at once appreciate how thoroughly we are contaminating it."

The **cost of proper ventilation** is so small, when compared with any other comfort or convenience, that no person who cares for good health should be without it. The means of supplying pure air are abundant, and with the "Pancoast" Ventilators applied to the roof, a continuous change of air can be secured in so perfect a manner that the most delicate person cannot be inconvenienced by it, and the same can be regulated to suit all conditions.

Am I supplying proper ventilation? This is a question that every architect should ask themselves when drawing plans. There is plenty of pure air out-doors, and people who are constantly in the open air are rarely sick, while those who are confined in-doors are seldom in the full vigor of health.

We will take pleasure in giving architects or others who desire further information upon ventilation, or wish to be supplied with ventilators, any information that they may desire, or have a representative of the Company call upon them, who will also give estimates free of charge.

Globe Knitting Mills, Norristown, Pa., showing 11 "Pancoast" Ventilators.

HALES & BALLINGER, Architects, Philadelphia, Pa.

The Waldorf-Astoria Hotel,
Fifth Ave. and 34th St.
New York City

H. I. HARDENBERGH, Architect
ALFRED R. WOLFF, Consulting Eng.

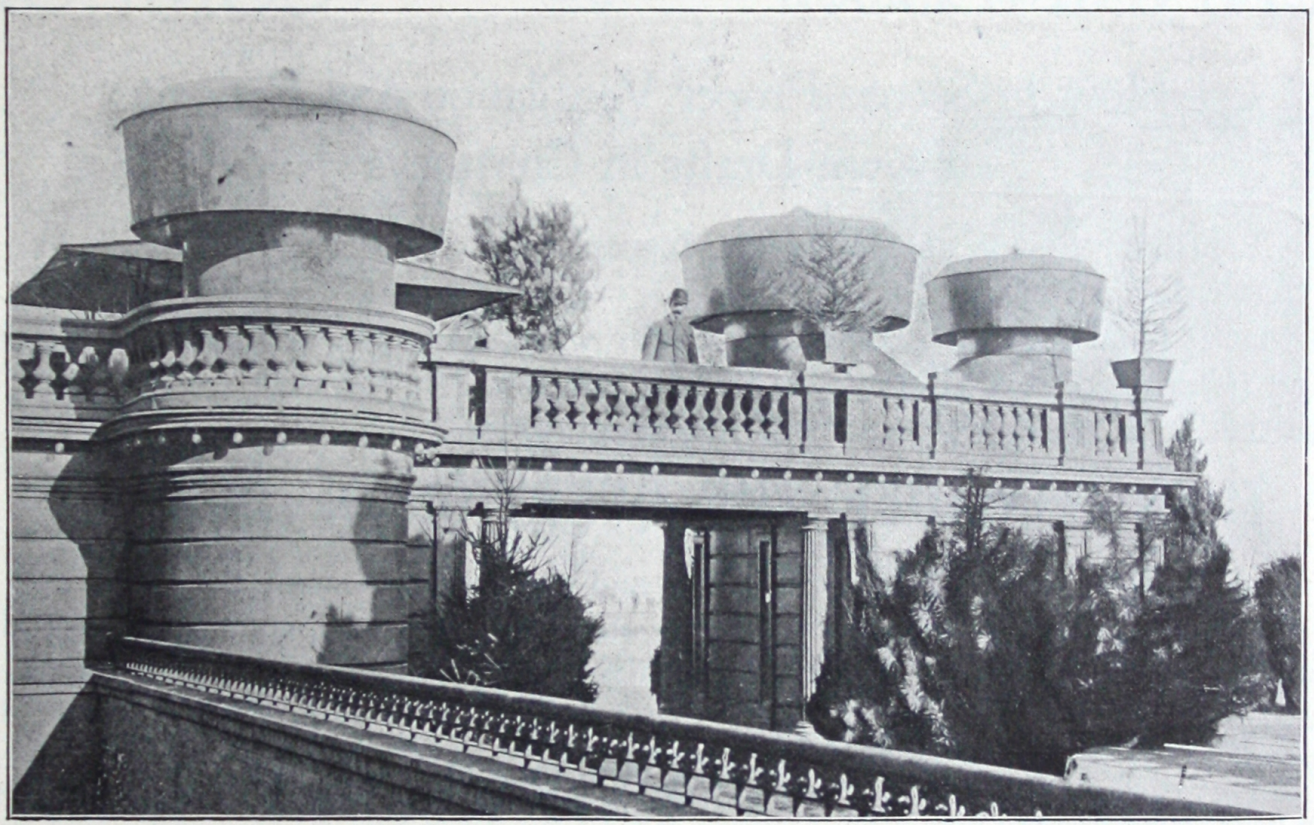
Attention is called to the fact that a large number of

"Pancoast"

60-inch (Copper)

Ventilators

Are used on this handsome Hotel, and on other prominent New York buildings



View of Roof Garden of the Waldorf-Astoria Hotel, New York City, showing Pancoast (Copper) Ventilators in use.

CLEANLINESS! COMFORT!

How to Secure Proper Ventilation and Prevent Down-Drafts in Chimneys

1st—Get a Ventilator that is absolutely anti-ingress.
2d—See that it has a free exit.
3d—And that it is so constructed that no matter what its angle, or from what direction the wind is blowing, it will create an upward draft.
4th—Also that it is storm-proof and will not admit water.

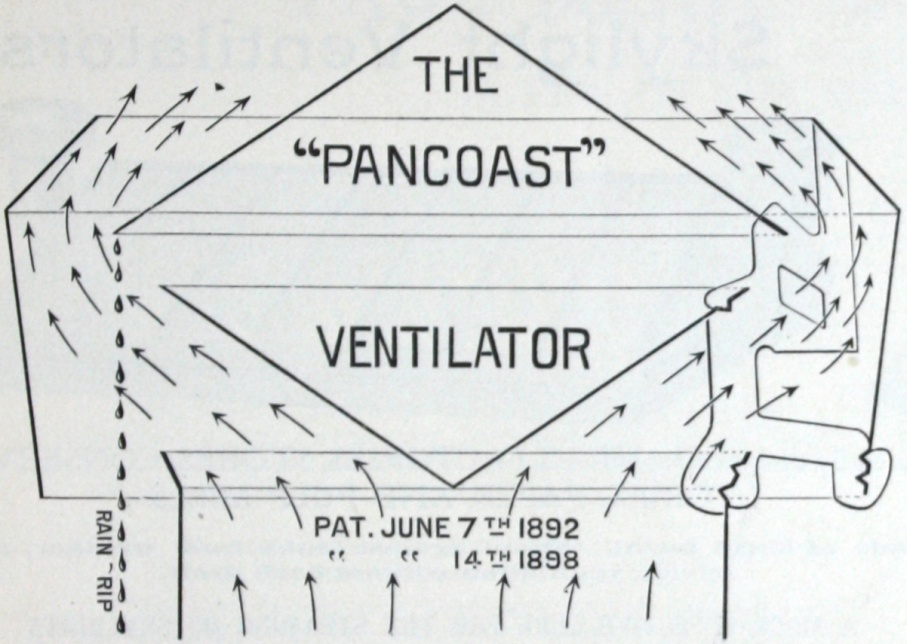
THEN CONSIDER THE QUESTION OF QUALITY

See what gauge of iron is used; how many and the kind of braces there are, and whether securely fastened; take into consideration also our reputation for making good goods. Our assortment is the largest, and we challenge comparison of quality or efficiency of our Ventilators or Braces.

THE PANCOAST

Fills all of these conditions, and is the only Ventilator on the market to-day that does. The cut on next page shows the detail of construction.

SHOWING DETAIL OF CONSTRUCTION



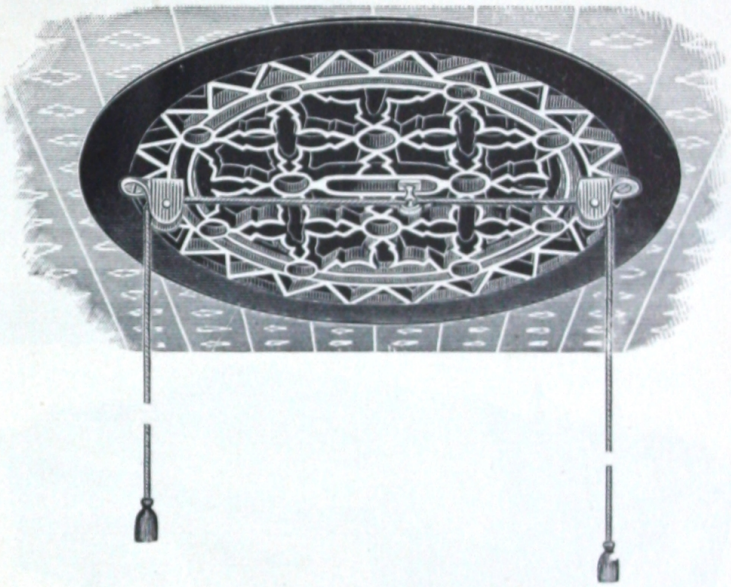
SECTIONAL VIEW, SHOWING FREENESS OF DRAFT

THE UNMATCHABLE

Pancoast Ventilator

A VENTILATOR THAT VENTILATES

Round Ceiling Ventilators

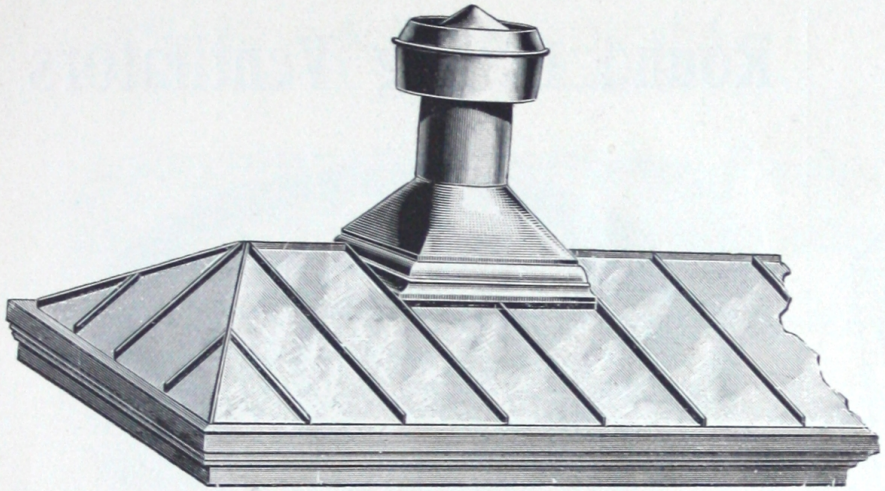


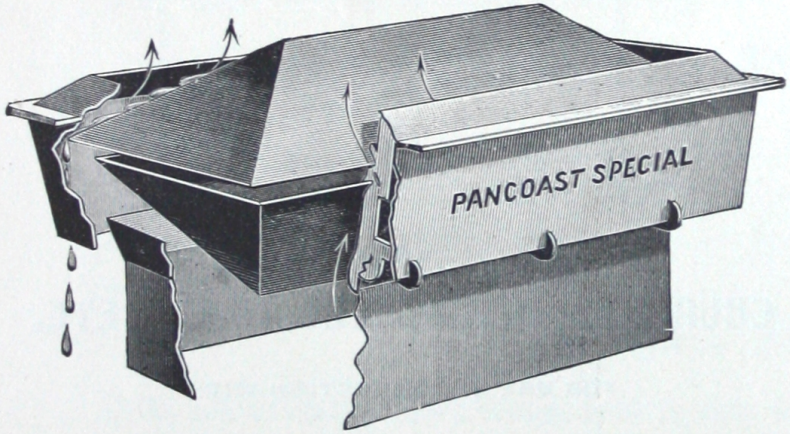
FOR

CHURCHES, RESIDENCES, HALLS, ETC.

FOR USE IN CONNECTION WITH

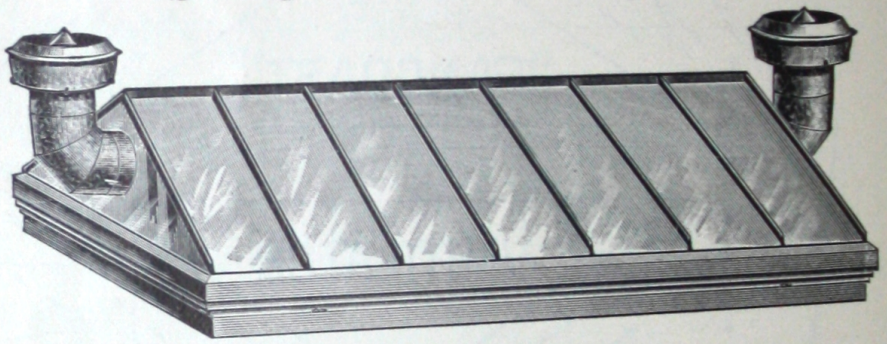
PANCOAST VENTILATORS





Made any size or dimension.

"PANCOAST"
Skylight Ventilators



Specially designed for MILLS, FACTORIES, STORES, CONSERVATORIES, PAPER AND PULP MILLS

Made of sheet metal. Proof against leaks from weather, and giving ventilation without back draft.

A MOST EFFECTIVE CURE FOR THE STEAMING OF SKYLIGHTS

Which is so troublesome and annoying, interfering with your health and comfort.

For withdrawing vitiated air from every description of buildings.

These Ventilators possess several valuable improvements over all other forms, which experience has shown to be necessary. Many thousands are in use, with the most satisfactory results. They are unquestionably the cheapest and best Ventilators on the market

PANCOAST SQUARE

Guaranteed Storm-Proof, and made of any size or dimension. If your dealer does not sell them, write us.

"TRUE MERIT IS APPRECIATED"

A FEW OF THE MANY TESTIMONIALS

WILLIAM HUSSEY, ESQ., Sanitary Engineer, Albert Hall Mansions, Kensington Gore, S. W., England, says:—

"I have found them effectual, where others have failed, in preventing down drafts."

What W. F. M. GOSS, Professor of Experimental Engineering and Director of the Engineering Laboratory, Purdue University, says:—

"The 66-inch 'Pancoast' Ventilator which was placed on the roof of our Engineering Laboratory last fall has given entire satisfaction. It provides a free discharge for our ventilating system and does not admit the weather."

CHAS. WATSON, Superintendent Engineer, Spreckels Sugar Refining Co., has this to say:—

"The four 30-inch neck ventilators put over our filters last spring have proved very satisfactory, being always storm-proof and free delivery."

ADDISON HUTTON, Architect, writes:—

"I believe the 'Pancoast' Cowl to be the best remedy to apply to chimneys having poor draft which I have yet seen."

Mr. THEODORE C. SEARCH, President National Association of Manufacturers, says:—

"That he regards the 'Pancoast' Ventilator a very excellent one indeed, and does not think any other is as good."

GEO. T. ARMITAGE, Chief Engineer, Girard Building, writes as follows:—

"The seven 'Pancoast' Ventilators on our building have proved entirely satisfactory. We had so much trouble on account of poor draft that I cannot indorse the 'Pancoast' too highly, and I do not think too much can be said in their favor. We find them perfectly storm-proof, with no downward draft, and think they are the most scientific Ventilator and Chimney Cowl now on the market."

THE AMERICAN TOBACCO CO. (Leaf Department), Durham, N. C., March 18, 1900, writes us:—

"Please enter our order for sixteen 24-inch galvanized iron 'Pancoast' Ventilators, with bases, as per your quotation. Same to be delivered June 1st."

FRED. MCCORMICK. HARRY L. FRENCH.

McCORMICK & FRENCH,
ARCHITECTS,
Wilkes-Barre, Pa., April 3, 1900.

National Pancoast Ventilator Co., Philadelphia, Pa.

"Gentlemen:—In regard to the 'Pancoast' Ventilators furnished by your Company to Gorman & Millet, of this city, for use on the new Asylum for the Insane at Retreat, Pa., will say that the working of the Ventilators are all that can be desired.

Respectfully yours,
McCORMICK & FRENCH."

GLOBE KNITTING MILLS.

Norristown, Pa., July 17, 1899.

The National Pancoast Ventilator Co., Philadelphia, Pa.

"Gentlemen:—By the use of the 'Pancoast' Ventilators, of which we have eleven on our factory and dyehouse, we consider our ventilating system perfect. All that has been claimed for it by the manufacturers has been fulfilled to our entire satisfaction. It is with pleasure that we attest to its true worth and usefulness.

Very respectfully,
RAMBO & REGAR,
Per LORD."

JOHN FRASER & SON, ARCHITECTS,
Imperial Building, 411 and 413 Walnut Street.

Philadelphia, Nov. 18, 1896.

Pancoast Ventilator Co.

"Gentlemen:—In reply to your inquiry as to the efficiency of the five 8-inch copper Ventilators I ordered recently for the *Chamberlin Hotel*, at *Old Point Comfort, Va.*, I have to report that they have proved very satisfactory, and have prevented the down draft which occurs at times in some of the chimneys at the hotel, owing, it is thought, to the peculiar atmosphere which prevails at times, which seems to prevent an upward current. The 'Pancoast' Ventilators have, however, overcome the difficulty, and I take pleasure in commending them for the uses for which they are recommended by the company.

Yours truly,
JOHN FRASER."

HOWARD JAMES, Purchasing Agent of the Northern Steamship Co., Eastern Railway Co. of Minnesota, Duluth, Minn., says:—

"In answer to your favor of the 25th inst. in regard to the efficiency of the 6-inch 'Pancoast' Ventilators sent us, I would say that we are now using them on our parlor car 'Nemadji,' running between Duluth and St. Paul, and up to the present time we are satisfied that they have made a decided improvement in the ventilation of the car. We used six to try them, and being satisfied that they were an improvement over the ventilators we had in use, we fully equipped the car with eighteen, and the ventilation is much better than ever before. We had, previous to the trial of the 'Pancoast,' used some three or four other kinds without success. They are very free from dirt and admit no rain whatever, although light can be seen through them very plainly when the damper inside of the car is opened. You may send us six more of the 'Pancoast' Car Ventilators."

THE UNCAS PAPER CO.

Norwich, Conn., Nov. 7, 1898.

The Pancoast Ventilator Co., Philadelphia, Pa.

"Gentlemen:—We have the two 54-inch 'Pancoast' Ventilators already set on our new mill and they are thus far giving us very satisfactory results. We will recommend them highly to anybody wishing a first-class Ventilator.

Yours respectfully,
THE UNCAS PAPER CO.,
F. W. Browning, Treas."

Philadelphia, April 6, 1900.

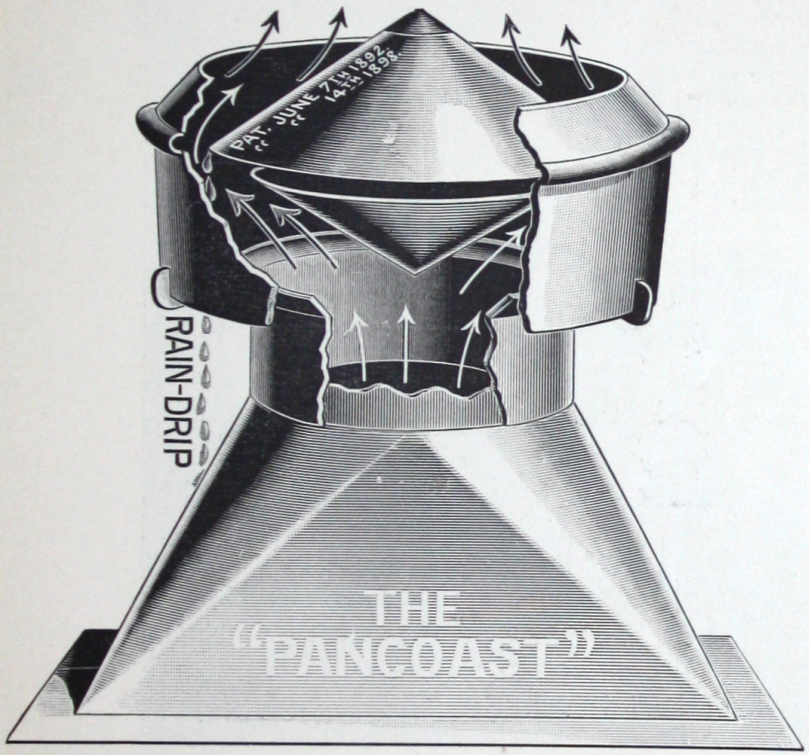
National Pancoast Ventilator Co.,
723 Drexel Building, Philadelphia.

"Gentlemen:—The twenty-inch Pancoast Ventilator placed in my roof some months since has given entire satisfaction, and I am therefore much pleased with the results obtained from it. It carries off the heat, and I consider its ventilating qualities superb.

Yours truly,
JOHN R. MCFETRIDGE,
1635 N. Seventeenth St."

"The World's Best" Ventilator, the "Pancoast"

Absolutely Storm-Proof

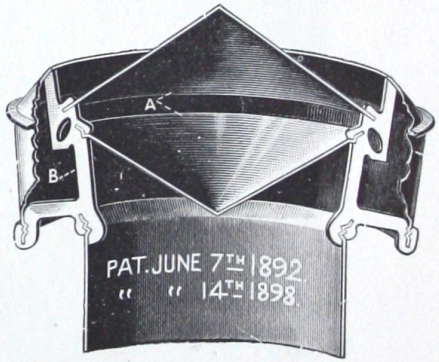


Sectional view, with base, showing that there are no obstructions to perfect ventilation.

The dotted lines and arrows show the **best route of exit** in this new style **PANCOAST**

The dotted lines and arrows show the **bad route of exit** in this old style **VENTILATOR**

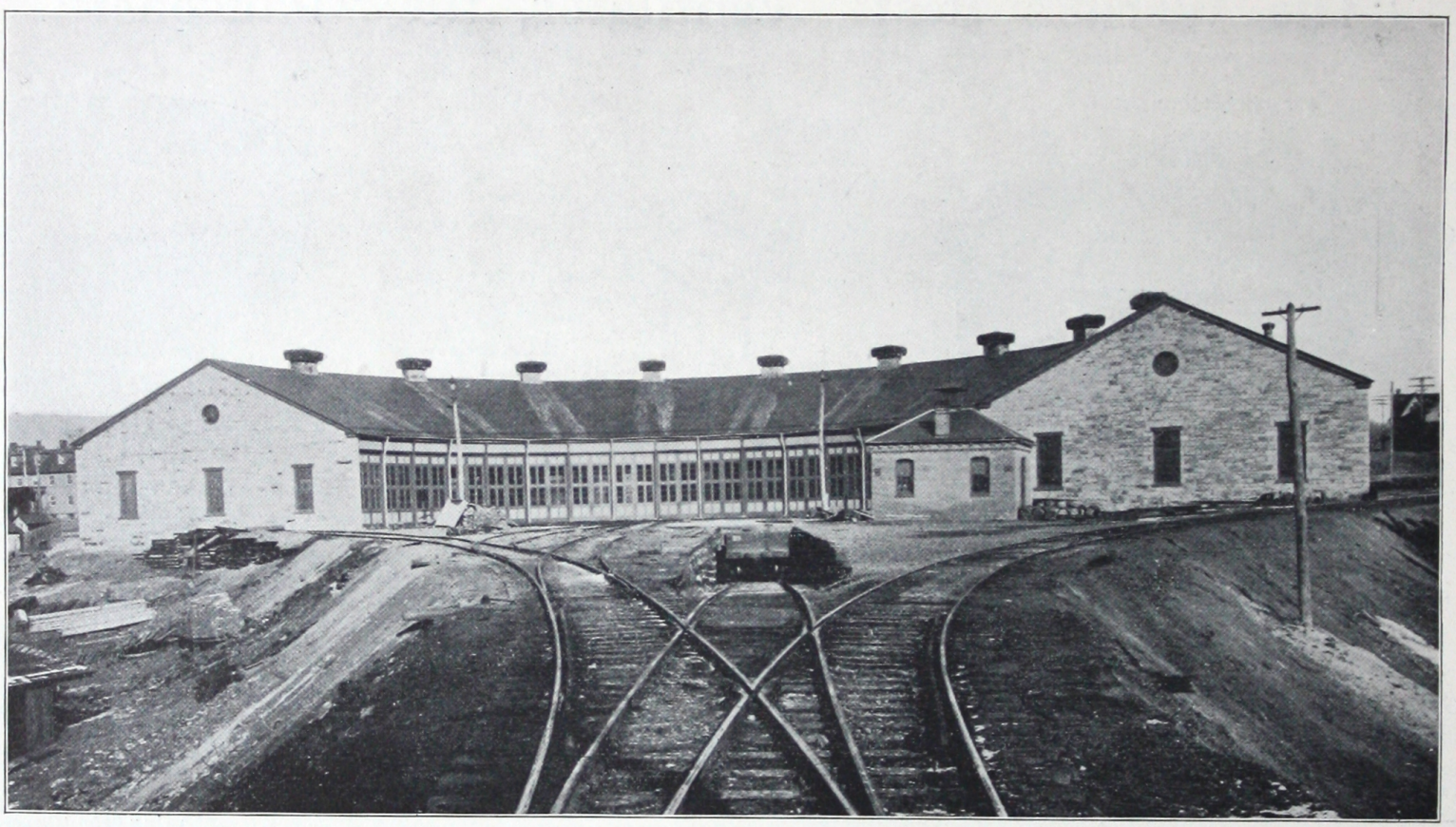
Complete View



Showing Patent Braces

There is None Better and None "Just as Good"

BASES.—There are several plans for making bases for chimney and roof application. We are prepared to furnish these at a low cost to purchasers of Ventilators. They are made of heavy galvanized iron, and are made to fit the pitch of the roof of buildings, or to fit any chimney.



New Round House, Huntingdon and Broad Top Mountain R. R. Co., Saxton, Pa., showing 9 4-feet x 6-feet square, and 29 20-inch round "Pancoast" Ventilators.

Huntingdon & Broad Top M. Railroad & Co.

Carl M. Gage
General Manager

Huntingdon, Pa., — December 20th, 99.

National Pancoast Ventilator Company,

Philadelphia, Pa.

Gentlemen:-

The twenty, 20" "Pancoast" round and the nine, 4' x 6' "Pancoast" Ventilators which we have placed on our new round house recently erected at Saxton, Pa., are fully up to all that you claim for them in carrying away all the sulphur from the soft coal which we use exclusively on all our engines. In fact it is a "ventilator which does ventilate." I take pleasure in testifying that they meet all our requirements and I shall be very glad at any time to recommend your ventilator to any parties interested. I remain,

Yours truly,

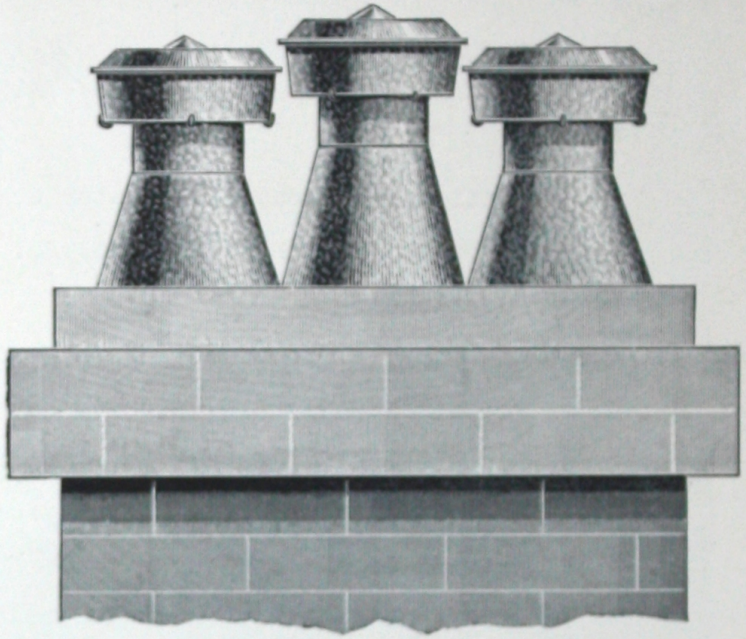
Carl M. Gage

General Manager.

CHIMNEYS

Is there any one part of the construction of any building that should receive more careful inspection and calculation as to a proper size, etc., than the chimney to which the heating apparatus is connected? The writer thinks not, and subjoins the following rules and the table of sizes.

If possible, a chimney should always be straight; but, if necessary to offset, great care should be taken to maintain the full sized as planned, as the actual area of a flue is determined by its smallest opening. Where possible a flue should be made round, as a much better draft can be maintained through a round flue than a square one, because it gives the greatest area in proportion to the perimeter or surface producing friction. If, however, a square flue is better adapted to a certain building, make the flue as near square as possible. For instance, an 8 x 12 flue contains 96 square inches, a 4 x 24 flue also contains the same square inches of area, and yet it does not take a long arithmetical calculation to convince the merest novice in the ventilating business that the frictional resistance in the latter flue is almost doubled. The draft of a chimney is the velocity with which the smoke or air passes through and out of the same, and as it is heat that causes the upward current, the chimney walls should be protected as much as possible from cold exposures.



Three-flue Chimney

THE PANCOAST AS A CHIMNEY COWL

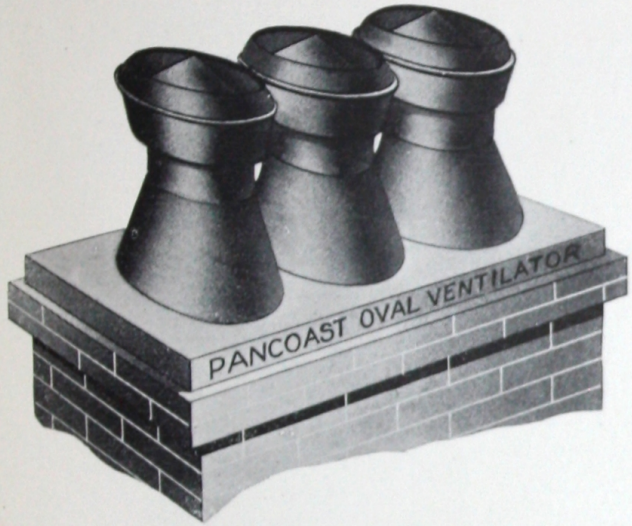
A practical and efficient method for the successful treatment of smoky chimneys.

As an agent for the prevention of downward currents in chimneys, with their attendant evils and the increase of drafts in sluggish flues, the Pancoast excels all others.

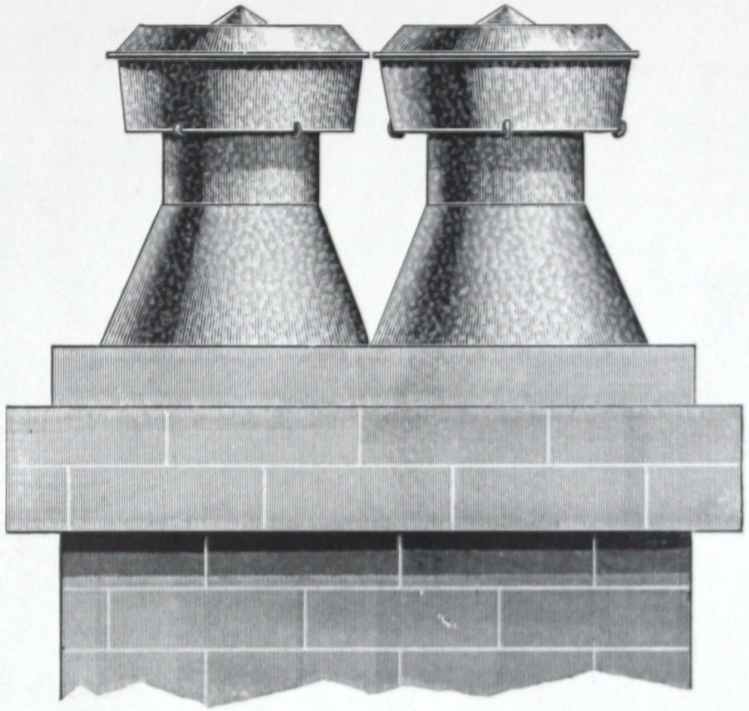
The cut shows the application to a chimney and its graceful appearance when applied.

In building the base, care should be taken to guard against dead air-spaces. It should be made to fit securely over the chimney, and then taper gradually to dimensions of pipe to which the cap is attached, thus allowing a free exist for smoke and gases. See cut.

Where a chimney has two or more flues a separate cap should be used, each independent of the other, but two or three flues may be covered with one base, having separate pipes and caps for each flue.

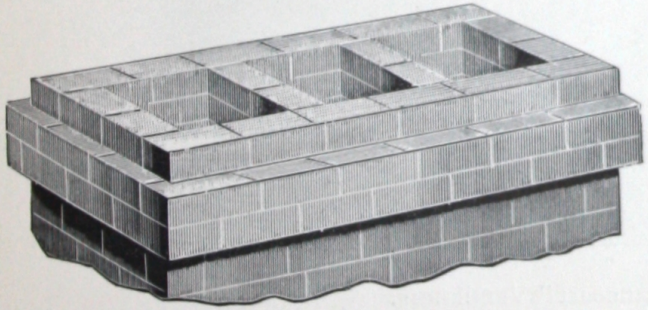


Application of "Pancoast" Oval Ventilators on Contracted Flues



Pancoast Ventilators for a Double-flue Chimney

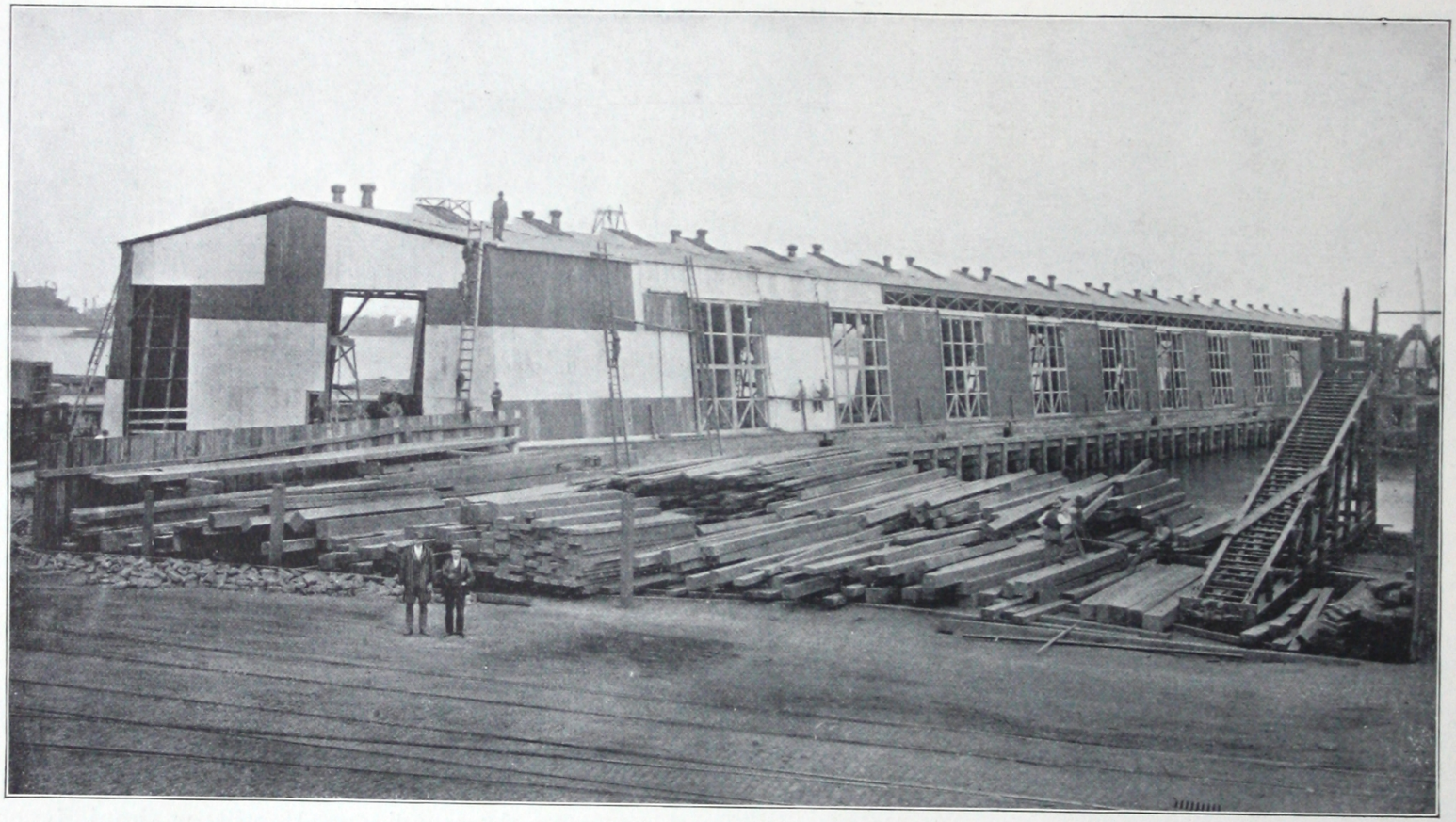
Complete View for a Single-flue Chimney



Showing Chimney Flues

The above cuts show the Pancoast Ventilators used as Chimney Caps

When used for this purpose the capacity of Ventilator should be equal to the flue opening. Thus, a 10 x 12 flue would require a 12-inch "Pancoast" ventilator.



Pennsylvania Railroad, Pier 41, South Delaware Avenue, showing "Pancoast" Ventilators.

Frankford Baptist Church, Paul and Unity Streets, Frankford, Philadelphia. Alteration and addition from an old rectangular church. Size, 80 x 80 feet. Ventilated with "Pancoast" Ventilators.

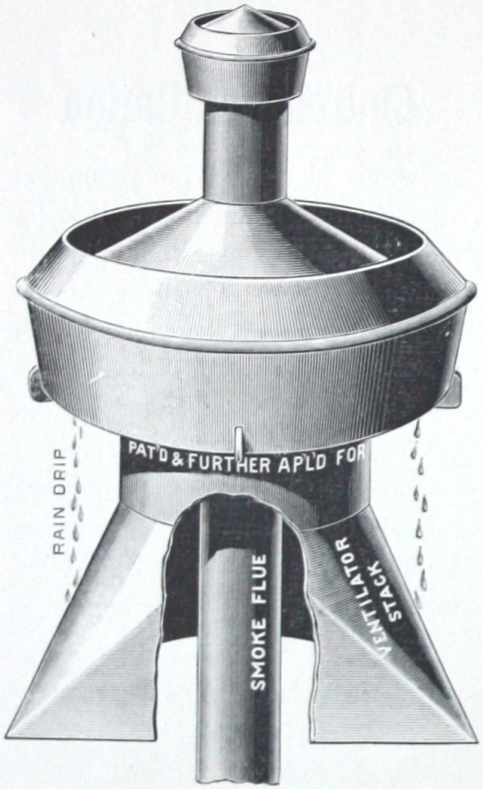
Church Ventilation

Is, we are glad to say, receiving that attention that it deserves. It is far more satisfactory, both spiritually and bodily, to listen, as well as preach, in churches properly ventilated with "Pancoast" Ventilators than otherwise.

We can refer to a large number of prominent Churches and Sunday-Schools that are now using Pancoast Ventilators, and which are entirely satisfactory.

Special reduction to all Churches and Sunday-Schools

CHARLES W. BOLTON, Architect
1007 Witherspoon Building, Philadelphia



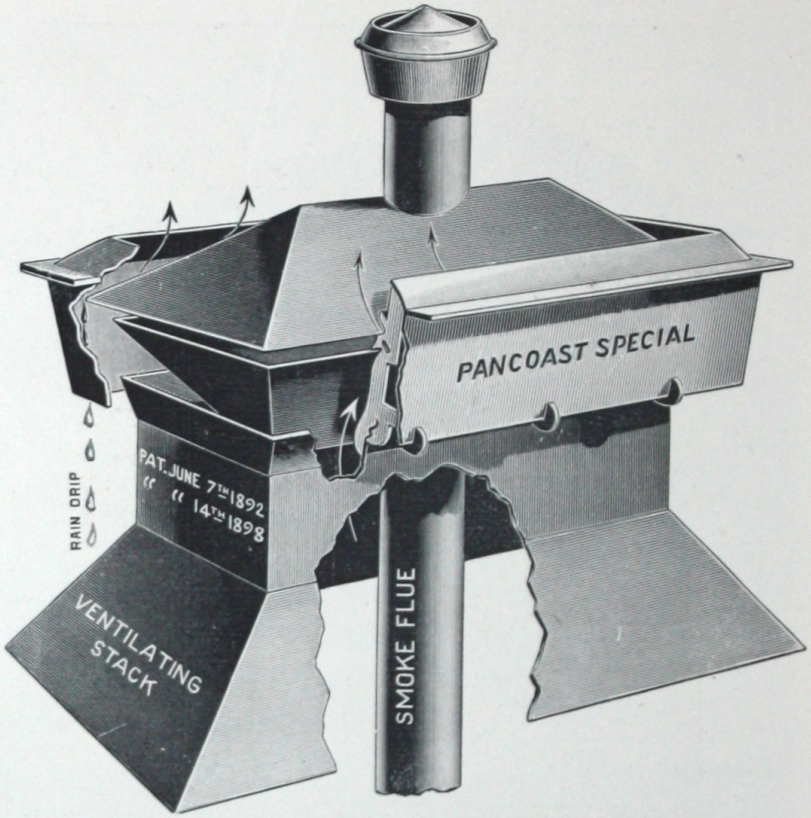
OUR new combined

Ventilating

AND

Smoke-Flue Ventilator

is filling a long-felt want



All **Ventilating Flues** should be covered, and our grand combination allows the free use of one flue for the double purpose of **Ventilation** and **Smoke,** at the same time is thoroughly protected from all storms, winds and weather.

This combination of Ventilator Caps is made in all sizes, either round or square.

Any one infringing these or other patents of ours will be prosecuted to the full extent of the law.

To **get the best results,** even with power fans, all ventilating and smoke flues should be protected from down drafts and storms. Every drop of rain that goes down the flue is a damage to it.

In use on Midland Beach Theatre. Largest Ventilator ever made.

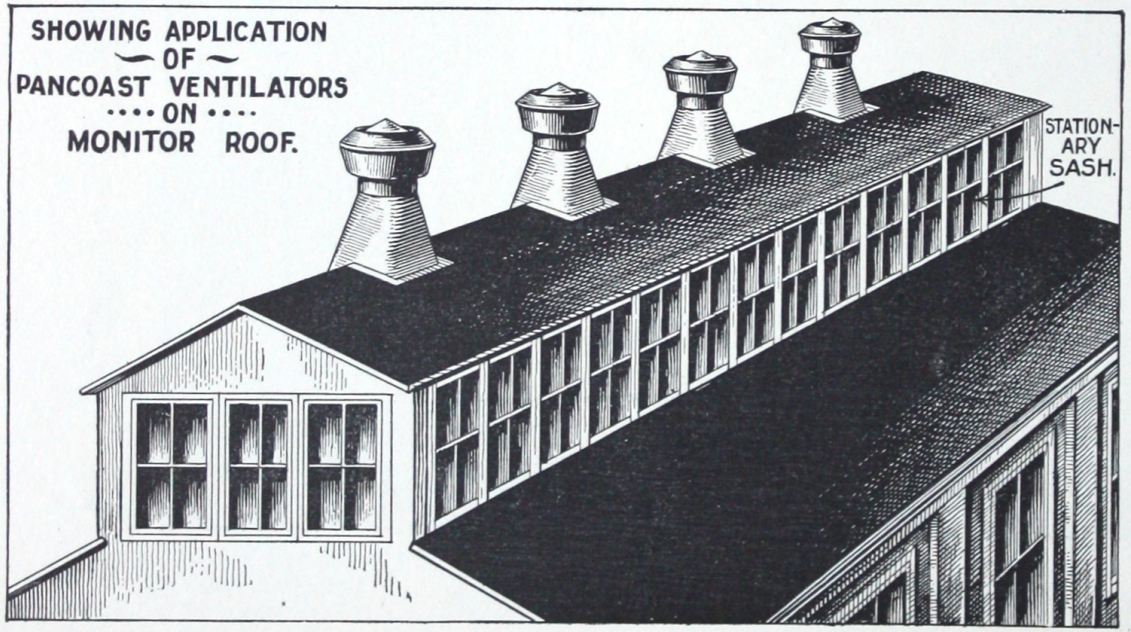
COTTON MILL AND WAREHOUSE VENTILATION

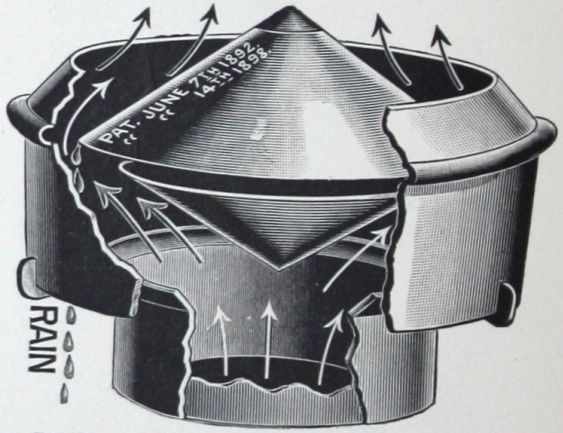
Most Up-to-Date and Inexpensive System of Securing Proper Ventilation

DON'T USE A POOR VENTILATOR

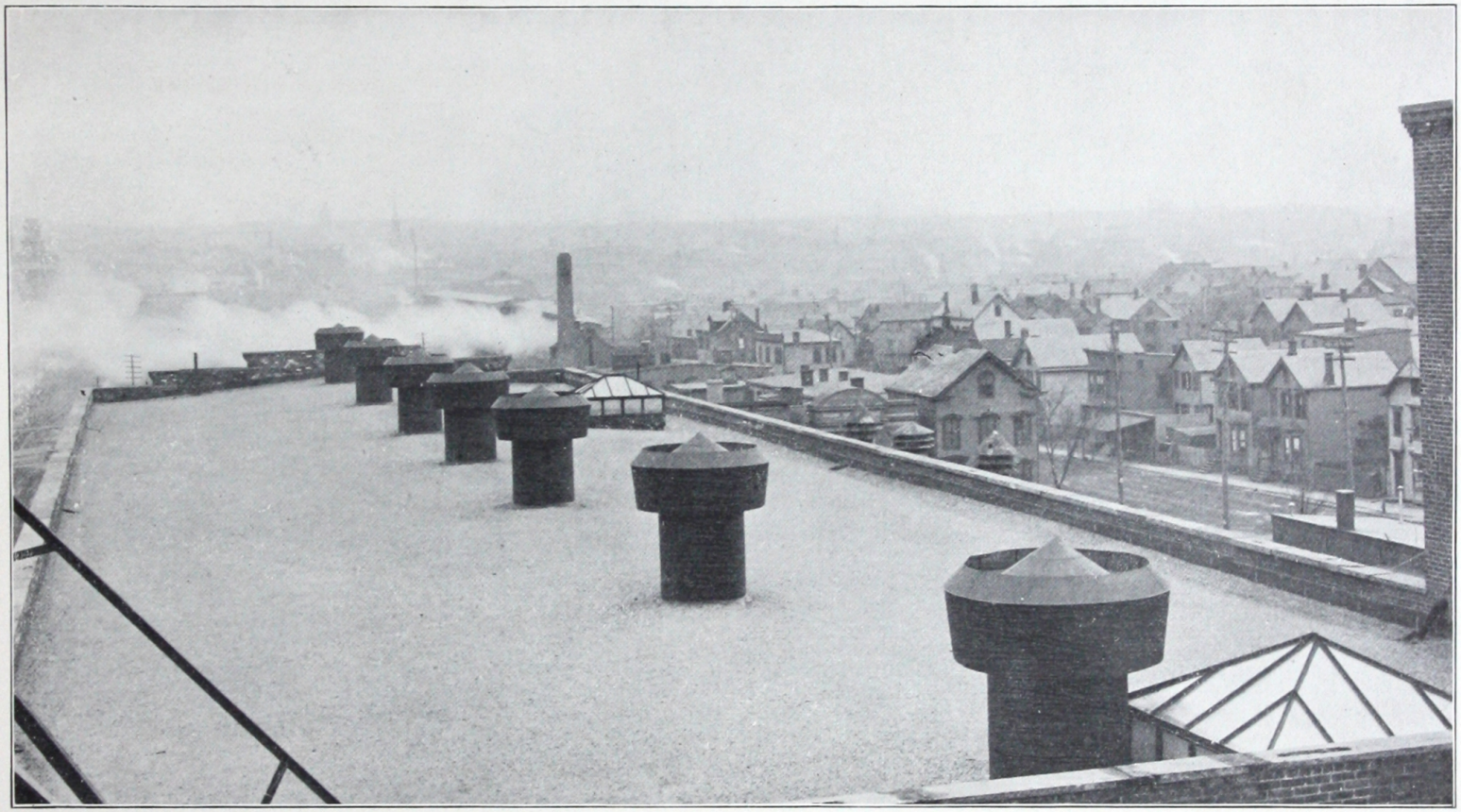
when you can buy the "Pancoast" for the same money. It always pays to use the best, and **we guarantee the "Pancoast"** to be the best ventilator made. A glance at its scientific construction will show you this.

We manufacture Pancoast Ventilators and Bases to be used with or without Monitor Roofs, and we can refer you to a large number of the best factories and mills that are now using them. We will be pleased to send you a sample Ventilator. Write for estimates.





Sectional View, showing that there are no obstructions to perfect ventilation



General Electric Co's Edison Lamp Works, Harrison, N. J.
Showing 7 48-inch "Pancoast" Ventilators.

New Law School of University of Penna. have in use a large number of "Pancoast" Ventilators.

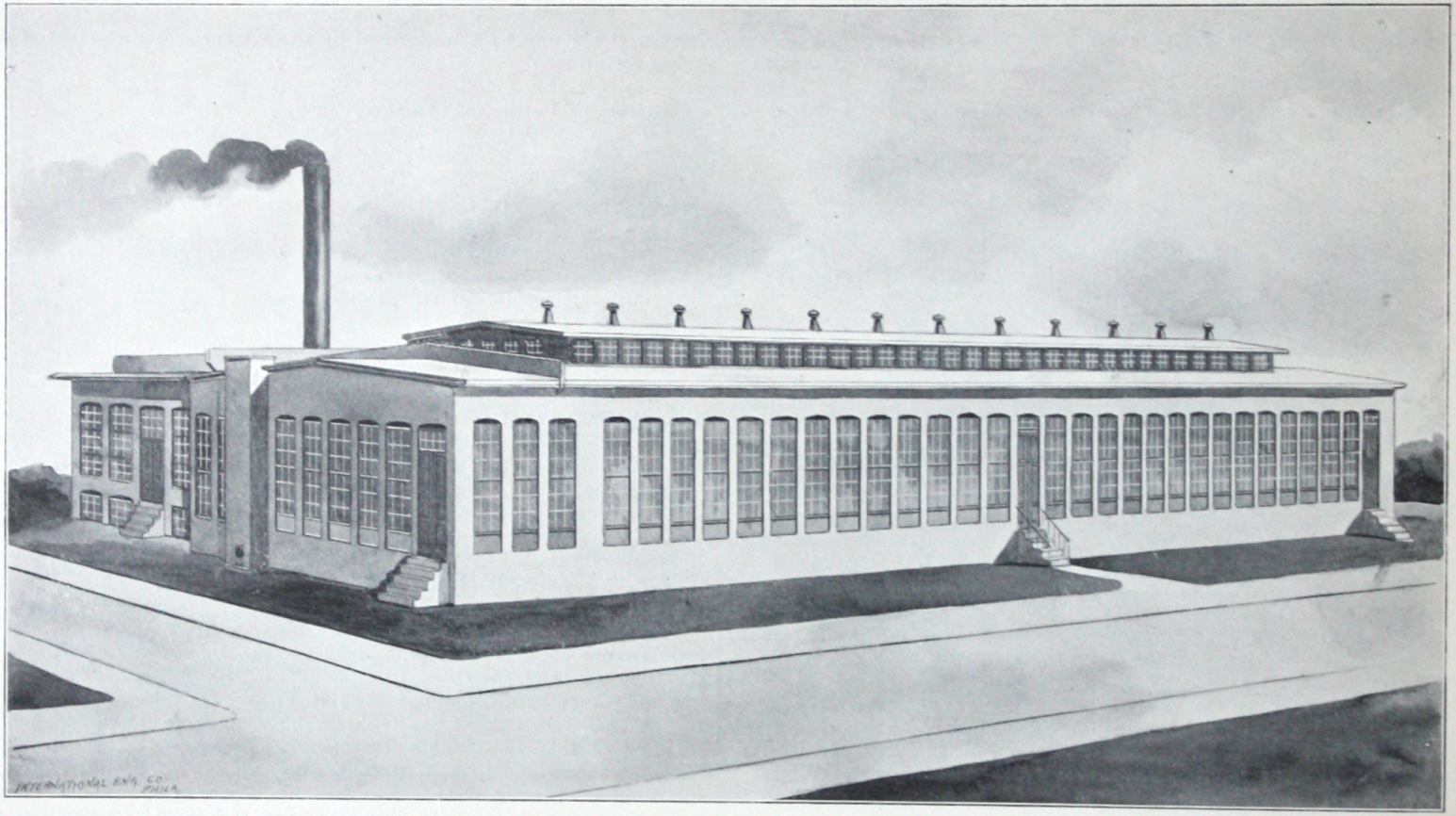
COPE & STEWARDSON, Architects, 320 Walnut St., Philadelphia, Pa.

PARTIAL LIST OF REFERENCES USING PANCOAST VENTILATORS

The superiority of the PANCOAST VENTILATORS over those of our competitors can best be judged by their having been selected for the following high-class buildings:

Midland's Beach Theatre, Staten Island, 10 foot, largest ventilator ever made.
Waldorf-Astoria Hotel, Fifth Ave., New York, several 60, 48 and 42-inch copper.
Empire Office Building, Broadway, New York, two 60-inch copper.
Insane Asylum, Retreat, Pa., 2 66, 2 55, 1 32-inch.
Baker Opera House, Rochester, New York, 60, 40 and 30-inch.
Horticultural Hall, Broad Street, Philadelphia, 60-inch.
Girard Building, Broad and Chestnut Streets, Philadelphia.
Metropolitan Traction Co's Power House, New York City, 15 42-inch copper.
National Cash Register, Dayton, Ohio.
Rochester State Asylum, Rochester, Minn.
National Carbide Co., Niagara Falls.
Singer Office Building, New York City.
General Electric Co's Building, Harrison, N. J., 7 48-inch.
Finley Acker & Co's Stables, Philadelphia, 3 72-inch.
U. S. Government Buildings, West Point and Fort Monroe, Va.
Shops, League Island Navy Yard, Philadelphia, Pa., 2 48-inch.
New York Air Brake Co's Buildings, Watertown, N. Y.
DeKosenko Mfg. Co's Acid Buildings, Philadelphia.
Nova Scotia Development Co's Railroad Round Houses, Nova Scotia
Trenton Gas and Electric Works' Buildings, Trenton, N. J.
Pittsburg Automobile Co's Factories, at Swissvale and Ardmore, Pa.
Philadelphia Export Exposition Buildings, Philadelphia.
Scovill Mfg. Co's Rolling Mills, Waterbury, Conn.
American Gas Co's Plants throughout the United States.
Rangeley Lake Hotel, Rangeley, Maine.
Philadelphia Country Club, Bala, Pa.
Geo. V. Cresson Co., Philadelphia, Pa.
Link Belt Co., Nicetown, Pa.
Liberty Silk Mills, 57th Street, New York City, 20 20-inch.
Ypsilanti Paper Mills, Ypsilanti, Mich.
Byron-Weston Co., Dalton, Mass.
Peninsula Paper Co., Ypsilanti, Mich.
Wm Cramp & Sons, Ship Builders, 10 24-inch and bases.
Oswego Falls Pulp and Paper Co., Fulton, N. Y.
The John Edwards Mfg. Co., Paper Makers, Port Edward, Wis.
John B. Stetson Hat Factory, Philadelphia, Pa.
Uncas Paper Mill, Norwich, Conn., finest in New England, 2 54-inch.
Southern Cotton Oil Co., Houston, Tex., and Little Rock, Ark.
Ida Yarn Mills, Laurel, N. C.
Globe Knitting Mills, Rambo & Regar, Norristown, Pa.
Chautauqua Worsted Mills, Jamestown, N. Y.
Cherry Cotton Mill Co., Florence Ala.
Ashaway Woolen Mills, Ashaway, R. I.
Mandeville Cotton Mills, Carrollton, Ga , 10 24-inch.
Wadesboro Cotton Mills, Wadesboro, N. C.
Piedmont Cotton Mills, Atlanta, Ga., 12 18-inch.
Dexter Portland Cement Co., Easton Pa., 14 24-inch.
Lowell Cotton Mills, Lowell, N. C., 12 18-inch.
Clinton Cotton Mills, Clinton, La.
Springstein Mills, Chester, S. C.
American Tobacco Co., Durham, N. C., 16 24-inch and bases.
Madison Brewing Co., Madison, Ind.
Monumental Brewery, Baltimore, Md.
University of Penna. Law School Buildings, Philadelphia.
Purdue University, La Fayette, Ind., 66-inch.
Public Schools, Minneapolis, 84 and 66-inch.
Public Schools, Philadelphia, Pa.
Public Schools, Cleveland, Ohio.
Jamestown High School, Jamestown, N. Y.
Pennsylvania Railroad, South Wharves, Philadelphia, 60 16-inch.
Philadelphia and Reading Railway.
Huntingdon and Broad Top R. R. Co., round house, Saxton, Pa., 9 54-inch square, 20 20-inch round.

No ventilator in so short a time has obtained such grand indorsements as the above, having been selected in preference to all others, for the finest buildings in the country.



Showing Lowell, N. C., and Piedmont, Ga., Cotton Mills, equipped with 18-inch "Pancoast" Ventilators.

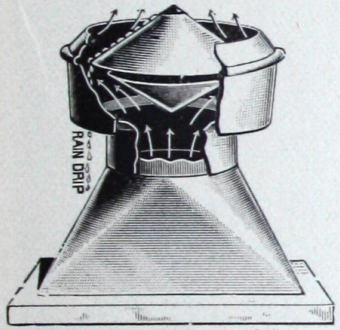
PROPER VENTILATION

CAN BEST BE OBTAINED BY USING THE

PANCOAST VENTILATORS

Three-fourths of all sickness can be traced to **impure air** in places of business, **schools, churches, club houses, mills** and **homes,** and 40 per cent. of all deaths occur through neglect of securing proper **ventilation.**

ABSOLUTELY STORM-PROOF



Small Sectional View, with Base, showing that there are no obstructions to perfect ventilation.

WE HAVE THE RECOMMENDATION OF EVERY

ARCHITECT AND OWNER

THAT HAS EVER USED THE PANCOAST VENTILATORS

They are Handsome, Strong, Durable, Efficient. They lead all in giving the best ventilation

They are put together with our patent **edgewise brace,** which is **several fold** less obstruction to the exit, and which **insures accuracy** of construction, prevents sagging from rough usage, and produces a manifold **stronger, more rigid** and **durable** Ventilator than the old **flat way** of bracing.

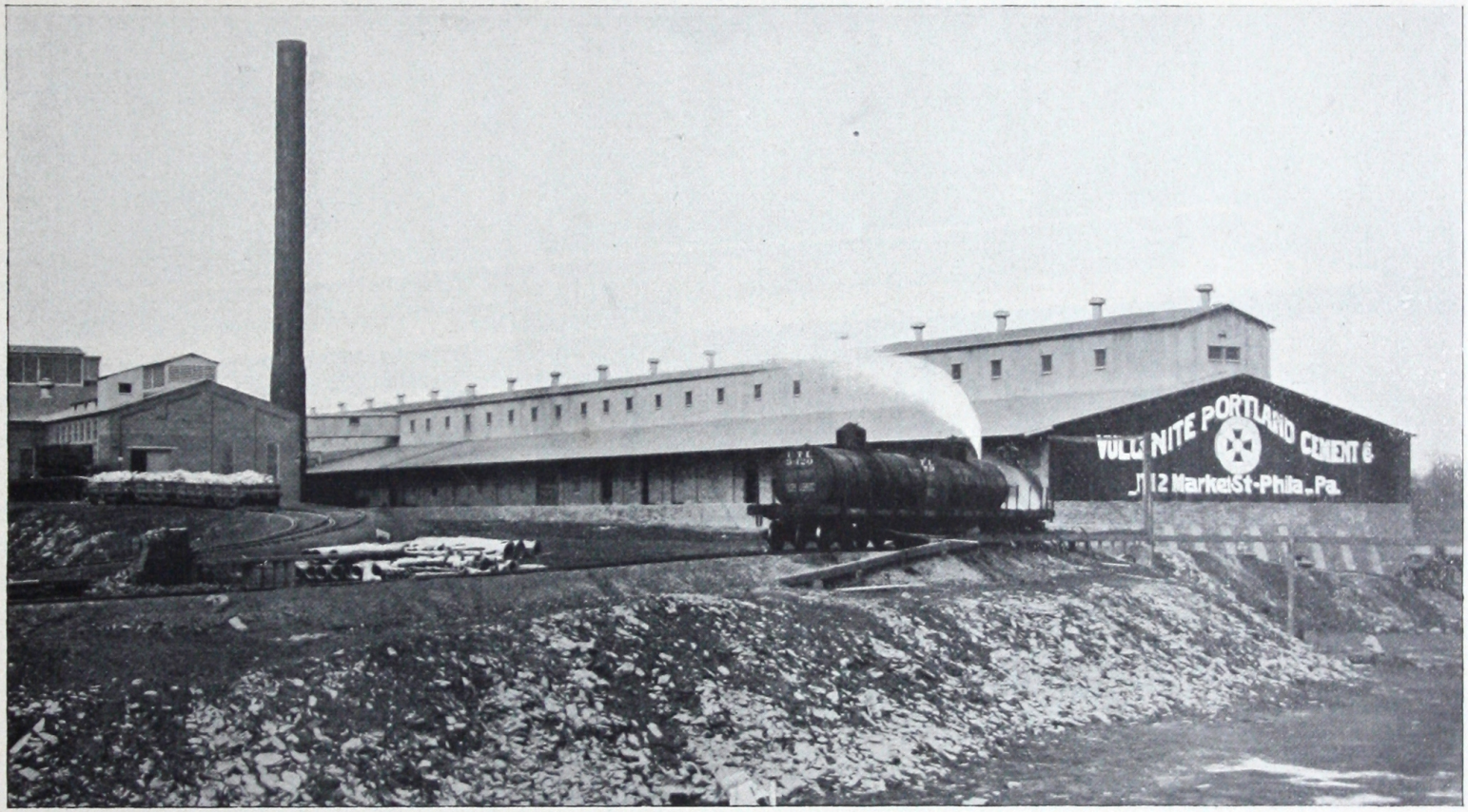
Send for testimonials and discounts. Made in all sizes, from two inches to ten feet, and guaranteed absolutely storm-proof.

Dyehouse Ventilation.—The cost is small but the satisfaction is great. No building is complete without a **Pancoast Ventilator.** They are the only Ventilators to use in ventilating breweries, distilleries, malt-houses, vats and buildings.

Buy only the best at prices to beat the world. Make no mistake. Our reputation is guarantee enough as to the high standard of the **Pancoast Ventilator.**

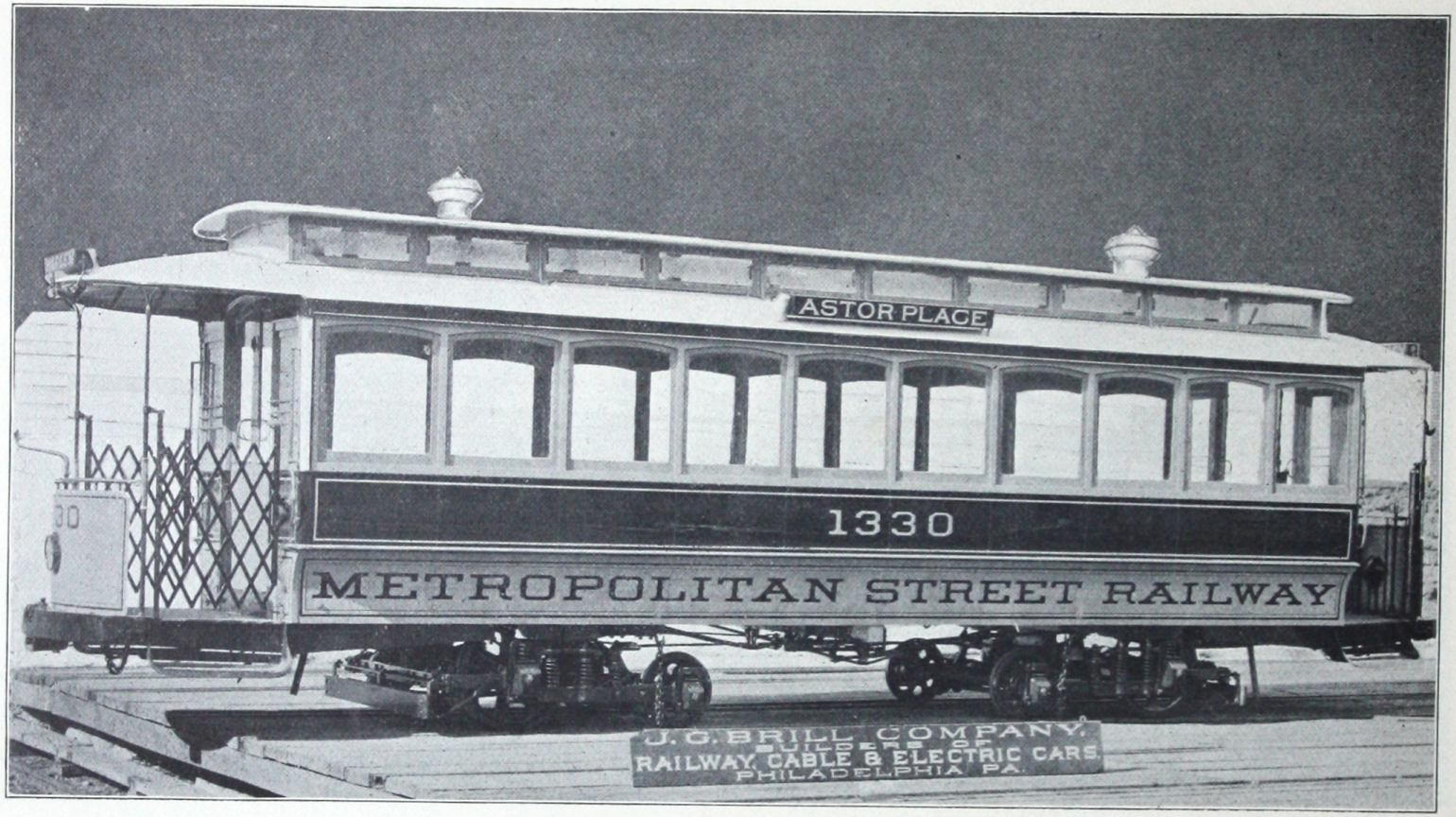
New Asylum for the Insane, Retreat, Pa.
Showing 2 66-in., 2 55-in., 1 30-in. "Pancoast" Ventilators.

McCormick & French, Architects,
Wilkes-Barre, Pa.



Vulcanite Portland Cement Works, Vulcanite, N. J., showing a large number of 24-inch "Pancoast" Ventilators.

CLARK DILLENBECK, Architect.



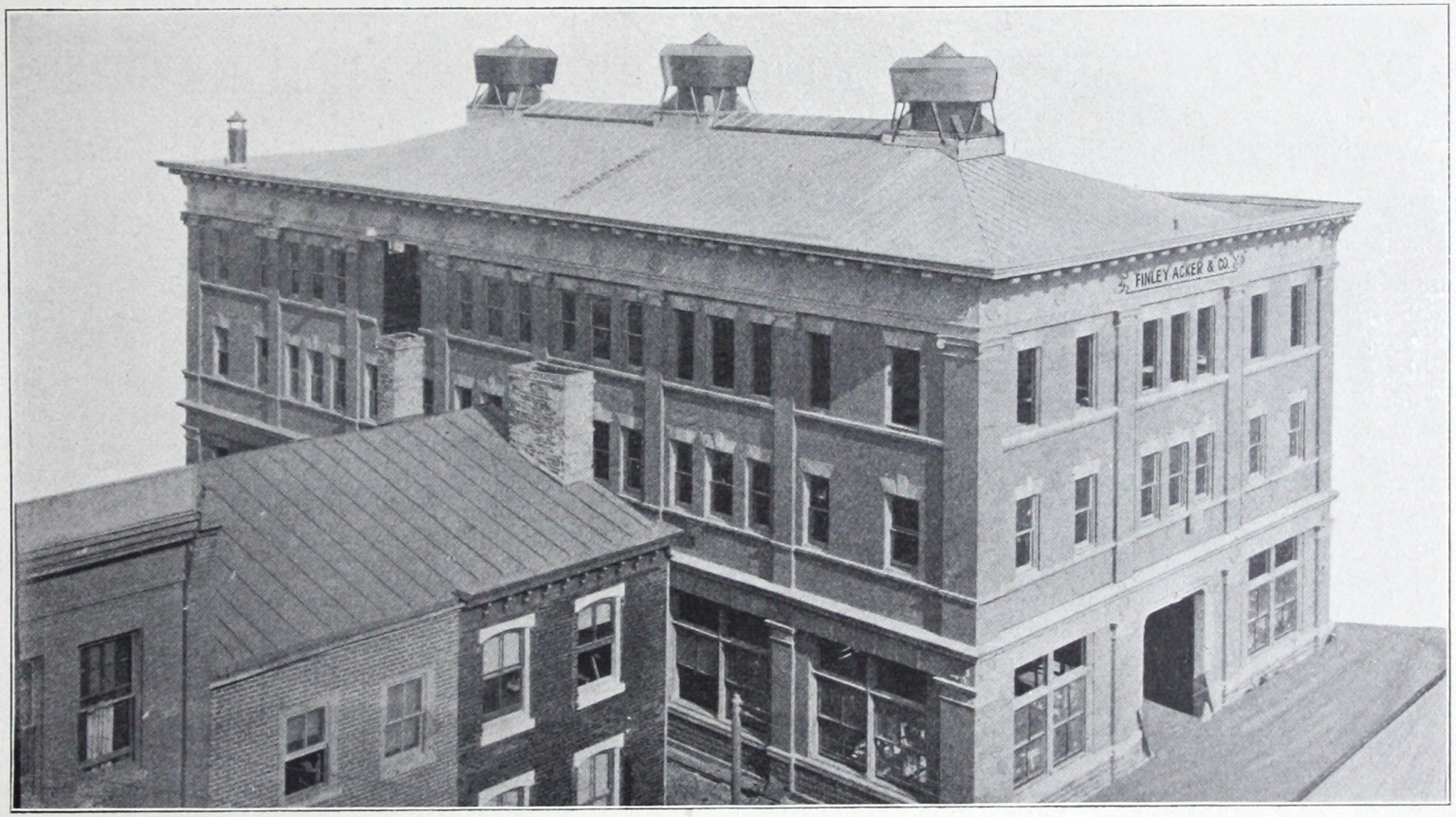
Showing proper manner of ventilating with "Pancoast" Ventilators.

NET PRICE OF GALVANIZED SHEETS

No. or Gauge		16	18	19	20	21	22	23
List price per lb.		12c.	13c.	13c.	13c.	13c.	14c.	14c.
Pounds per sq. ft		2.656	2.156	1.906	1.656	1.53	1.406	1.28
List price sq. ft.		31.87	28.02	24 77	21.52	19 89	19 68	17.92
Discount per cent.		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
67½	lb.	3.90	4.22	4.22	4.22	4.22	4.55	4.55
	sq. ft.	10.36	9.10	8 04	6 99	6.45	6.39	5.82
67½ & 5	lb.	3.70	4.01	4.01	4.01	4.01	4 32	4.32
	sq. ft	9.82	8.64	7 64	6 64	6.13	6.07	5.53
67½ & 10	lb.	3.51	3.80	3.80	3.80	3.80	4 09	4.09
	sq. ft.	9.32	8.19	7.24	6.29	5.81	5.75	5 23
70	lb.	3.60	3.90	3 90	3.90	3.90	4 20	4.20
	sq. ft.	9.56	8.41	7.43	6.46	5.96	5.90	5 37
70 & 5	lb.	3.42	3.70	3.70	3.70	3.70	3.99	3.99
	sq. ft.	9.08	7.97	7.05	6 12	5.66	5 61	5.10
70 & 10	lb	3.24	3.51	3.51	3.51	3.51	3 78	3.78
	sq. ft.	8.60	6.98	6.69	5.81	5 37	5.31	4 84
72½	lb.	3.30	3.57	3 57	3.57	3.57	3 85	3.85
	sq. ft.	8.76	7.69	6 80	5 91	5.46	5.41	4 93
72½ & 5	lb.	3.13	3.39	3.39	3.39	3.39	3.65	3.65
	sq. ft.	8.31	7.30	6.46	5 61	5.18	5.13	4 67
72½ & 10	lb.	2.97	3.21	3 21	3.21	3.21	3.46	3.46
	sq. ft.	7.89	6.92	6.12	5 31	4.91	4.86	4.43
75	lb.	3.	3.25	3.25	3 25	3.25	3.50	3.50
	sq. ft.	7.97	7.	6.19	5.38	4.97	4.92	4.48
75 & 5	lb.	2 85	3 08	3 08	3 08	3.08	3.32	3 32
	sq. ft	7.57	6.64	5 87	5.10	4 71	4 66	4 25
75 & 10	lb.	2.70	2 92	2 92	2.92	2 92	3.15	3.15
	sq. ft.	7.17	6.29	5.56	4.83	4.46	4.43	4.03
77½	lb.	2.70	2.92	2.92	2.92	2.92	3.15	3.15
	sq. ft.	7.17	6.28	5.56	4.83	4.46	4 43	4 03
77½ & 5	lb.	2.56	2.77	2.77	2.77	2.77	2 99	2.99
	sq. ft.	6 80	5.97	5.28	4.58	4 24	4 20	3.82
77½ & 10	lb.	2.43	2.63	2.63	2 63	2.63	2 83	2.83
	sq. ft.	6.45	5.67	5.01	4.35	4 02	3.98	3.62
80	lb.	2.40	2.60	2 60	2 60	2.6	2 80	2.80
	sq. ft.	6.37	5 60	4.95	4.30	3.98	3 93	3.58
80 & 5	lb.	2.28	2.47	2 47	2.47	2.47	2.66	2.66
	sq. ft.	6 05	5.32	4 70	4 09	3.78	3 74	3.40

No. or Gauge		24	25	26	27	28	29	30
List price per lb.		14c.	15c	15c.	16c.	17c.	19c.	21c.
Pounds per sq. ft.		1.156	1.03	.906	.8437	.7812	.7187	.6562
List price sq. ft.		16.18	15.45	13.59	13.49	13.28	13 65	13.78
Discount per cent.		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
67½	lb.	4 55	4.87	4 87	5.20	5.52	6 17	6.82
	sq. ft.	5.26	5.01	4.41	4.38	4.31	4.43	4.47
67½ & 5	lb.	4 32	4.63	4.63	4.94	5.24	5.86	6.48
	sq. ft.	4.99	4.77	4.19	4.16	4.09	4.21	4.25
67½ & 10	lb.	4.09	4 38	4.38	4.68	4 97	5.55	6.14
	sq. ft	4.73	4 51	3.95	3.95	3.88	3.99	4.03
70	lb.	4 20	4 50	4.50	4.08	5.10	5.70	6.30
	sq. ft.	4.85	4 63	4.07	4.05	3.98	4 09	4.13
70 & 5	lb.	3.99	4.27	4.20	4 56	4.84	5.41	5 98
	sq. ft.	4.61	4.40	3.87	3.84	3.78	3.89	3.92
70 & 10	lb.	3 78	4.05	4.05	4.32	4.59	5.13	5.67
	sq. ft.	4 37	4.17	3 67	3.64	3 58	3.68	3.72
72½	lb.	3.85	4.12	4.12	4.40	4 67	5.22	5.77
	sq. ft.	4.45	4.24	3 73	3.71	3.65	3.75	3.79
72½ & 5	lb.	3.65	3.91	3.91	4.18	4 44	4 96	5.48
	sq. ft.	4 23	4.02	3.54	3 52	3.47	3.56	3 59
72½ & 10	lb.	3.46	3.71	3.71	3.96	4.20	4.70	5.19
	sq. ft.	4	3.82	3.36	3.34	3 28	3 37	3.40
75	lb.	3.50	3.75	3.75	4.	4.25	4.75	5 25
	sq. ft.	4 04	3.86	3 39	3.37	3.32	3.41	3.44
75 & 5	lb.	3.32	3.56	3.56	3 80	4.03	4.51	4 98
	sq ft.	3 83	3.63	3.22	3.21	3.15	3.24	3 26
75 & 10	lb.	3.15	3.37	3 37	3 60	3.82	4 27	4.72
	sq. ft.	3.64	3 47	3 05	3.03	2.98	3.07	3 09
77½	lb.	3.15	3.37	3 37	3 60	3.82	4.27	4 72
	sq. ft.	3.61	3.47	3 05	3.03	2.98	3.07	3.09
77½ & 5	lb.	2.99	3.20	3.20	3 42	3.63	4.06	4.48
	sq. ft.	3.45	3 29	2 90	2 88	2.83	2.91	2 94
77½ & 10	lb.	2.83	3.03	3.03	3.24	3.44	3.84	4.25
	sq. ft.	3.27	3.12	2.74	2.73	2.68	2.76	2.79
80	lb.	2.80	3.	3.	3.20	3 40	3.80	4.20
	sq. ft.	3.23	3.09	2.70	2.70	2.65	2.73	2.75
80 & 5	lb.	2.66	2.85	2 85	3.04	3 23	3.61	3 99
	sq. ft.	3.07	2 93	2 58	2 56	2 52	2.59	2.62

60-inch "Pancoast" Ventilator in use on Horticultural Hall, Broad Street, Philadelphia, Pa.
WILSON BROS. & Co., Engineers and Architects, Drexel Building, Philadelphia.



Finley Acker & Co's Stable, Philadelphia, Pa., showing 3 72-inch "Pancoast" Ventilators.

STANDARD PRICE-LIST OF

GALVANIZED IRON AND COPPER VENTILATORS

We give below the area in SQUARE INCHES, also PRICE-LIST of the various sizes we manufacture. Neck measure (which is the basis of all sizes):

				Price
2 inches	contains	4 sq. in.	26 gauge iron	$1.00
4 "	"	13 "	26 " "	1.75
5 "	"	19 "	26 " "	2 50
6 "	"	28 "	26 " "	3.40
7 "	"	40 "	26 " "	4.00
8 "	"	50 "	26 " "	4.65
9 "	"	64 "	26 " "	5.20
10 "	"	78 "	24 " "	5 75
12 "	"	113 "	24 " "	6.75
13 "	"	134 "	24 " "	10.00
14 "	"	164 "	24 " "	13 00
15 "	"	177 "	24 " "	16 00
16 "	"	201 "	22 " "	20 00
18 "	"	255 "	22 " "	27.00
20 "	"	314 "	22 " "	33.00
22 "	"	380 "	22 " "	36.00
24 "	"	453 "	20 " "	40.00
26 "	"	521 "	20 " "	50.00

				Price
28 inches	contains	615 sq. in	20 gauge iron	$56 00
30 "	"	707 "	20 " "	65.00
32 "	"	804 "	20 " "	80.00
34 "	"	908 "	20 " "	100.00
36 "	"	1,017 "	20 " "	120 00
40 "	"	1,257 "	18 & 20 " "	180.00
42 "	"	1,386 "	18 " 20 " "	190 00
44 "	"	1,620 "	18 " 20 " "	200.00
48 "	"	1,809 "	18 " 20 " "	240.00
54 "	"	2,390 "	18 " 20 " "	300 00
60 "	"	2,807 "	18 " "	360.00
66 "	"	3,456 "	18 " "	420 00
72 "	"	4,071 "	18 " "	480.00
84 "	"	5,539 "	16 " "	600.00
90 "	"	6,361 "	16 " "	660 00
96 "	"	7,238 "	16 " "	720 00
10 feet	"	11,309 "	16 " "	960.00

Discount upon application. The price of the Bases is always extra, according to the number and sizes.

USEFUL INFORMATION

To find circumference of a circle multiply diameter by 3.1416.
To find diameter of a circle multiply circumference by .31831.
To find area of a circle multiply square of diameter by .7854.
To find surface of a ball multiply square of diameter by 3.1416.
To find side of an equal square multiply diameter by .8862.
To find cubic inches in a ball multiply cube of diameter by .5236.
Doubling the diameter of a ventilator pipe increases its capacity four times.
A gallon of water (U. S. standard) weighs 8⅓ lbs. and contains 231 cubic inches.
A cubic foot of water contains 7½ gallons, 1,728 cubic inches, and weighs 62½ lbs.
To find the pressure in pounds per square inch of a column of water multiply the height of the column in feet by .434.
Steam rising from water at its boiling point (212 degrees) has a pressure equal to the atmosphere (14.7 lbs. to the square inch).
A standard horse power: The evaporation of 30 lbs. of water per hour from a feed-water temperature of 100° F. into steam at 70 lbs. gauge pressure.
To find capacity of tanks any size; given dimensions of a cylinder in inches, to find its capacity in U. S. gallons: Square the diameter, multiply by the length and by .0034.
A ton of hard coal (loose) measures 35½ cubic feet.
A ton of soft coal (loose) measures 41 cubic feet.
One square foot of grate will consume on an average 12 lbs. of hard coal or 20 lbs. of soft coal per hour with natural draft.
One Cord Air-Dried Hickory or Hard Maple weighs about 4,500 lbs., and is equal to about 2,000 lbs. soft coal.
One Cord Air-Dried White Oak weighs about 3,850 lbs., and is equal to about 1,715 lbs. of soft coal.
One Cord Air-Dried Beach, Red Oak and Black Oak weighs about 3,250 lbs., and is equal to about 1,450 lbs. of soft coal.
One Cord Air-Dried Poplar, Chestnut and Elm weighs about 2,350 lbs., and is equal to about 1,050 lbs. of soft coal.
One Cord Air-Dried Average Pine weighs about 2,000 lbs., and is equal to about 925 lbs. of soft coal.
From the above it is safe to assume that 2¼ lbs. of dry wood is equal to 1 lb. of average quality of soft coal. A *pound* of *dry* pine is worth as much for fuel as a *pound* of *dry* hickory.